IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Discher *et al.*

Application No.: 09/460,605 Group Art Unit: 1615

Filed: December 14, 1999 Examiner: G. Kishore

Title: POLYMERSOMES AND RELATED ENCAPSULATING MEMBRANES

Assistant Commissioner for Patents
Washington, DC 20231

AMENDMENT AND RESPONSE

This amendment and response is timely filed in response to the Office Action mailed June 5, 2001 and is accompanied by a request for a 1-month extension of time.

In the Specification:

Please replace the paragraph at page 4, lines 17-29 with the following rewritten paragraph:

Many wholly or partially synthetic, amphiphilic molecules are also significantly larger (in molecular weight, volume, and linear dimension) than phospholipid amphiphiles, and have therefore been called "super-amphiphiles" (Cornelissen *et al., Science* 280:1427 (1998)). Cornelissen *et al.* used polystyrene (PS) as a hydrophobic fraction in their series of synthetic block copolymers designated PS40-b-(isocyano-L-alanine-L-alanine)y. For y = 10, but not y = 20 or 30, loop structures, referred to as small collapsed vesicles, having diameters ranging from tens of nanometers to several hundred, and a bilayer thickness of 16 nanometer were mentioned as existing under a single acidic buffer condition (0.2 mM Na-acetate buffer, pH 5.6). However, bilayer filaments and superhelical rods existed, without explanation, under the same solution conditions, thus making the stability of the collapsed vesicles, relative to the other microstructures, highly uncertain for the studied dipeptide-based copolymer. Furthermore, no demonstration of semi-permeability was reported, and reasons for apparent vesicle collapse were not given, further raising questions of vesicle stability.

Please replace the paragraph at page 5, lines 10-20 with the following rewritten paragraph:

Both amphiphiles and super-amphiphiles can exist in a broad variety of microphases and bulk phases that include not only lamellar, but also hexagonal, cubic, and more exotic phases